## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

§

pplication No.:

10/827,099

Filed:

Confirmation No.: 1460 April 19, 2004

Inventor(s):

Stephen J. Dodd

Title:

MAGNETIC COIL DESIGN

USING OPTIMIZATION OF

**SINUSOIDAL COEFFICIENTS**  Examiner:

Unknown

Art Unit:

2858

Atty. Dkt. No:

5660-01901/EBM

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

DATE OF DEPOSIT:

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail on the date indicated above and is addressed to:

Commissioner for Patent

## INFORMATION DISCLOSURE STATEMENT

§ § § § §

MS AMENDMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

It is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of references B1-B16 are enclosed for the convenience of the Examiner.

Should any fees be required, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account No. 50-1505/5660-01901/EBM.

Respectfully submitted.

Eric B. Meyertons

Reg. No. 34,876

Attorney for Applicant(s)

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.

P.O. BOX 398

AUSTIN, TEXAS 78767-0398

(512) 853-8800 (voice) (512) 853-8801 (facsimile)

Form PTO-1449 (modified) For Applicant's Information Disclosure Statement

ATTY. DKT. NO. 5660-01901

SERIAL NO. 10/827,099

APPLICANT: Stephen J. Dodd

GROUP: 2858

(Use several sheets if necessary)			FILING DATE: April 19, 2004							
٠,		U.S	S. PATENT D	OCUMENTS			-			
EXAM. INITIALS	REF. DES.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIAT			
		4,646,024	02/24/1987	Schenck et al.						
		5,266,913	11/30/1993	Chapman						
		5,309,107	05/03/1994	Pausch						
		5,334,937	08/02/1994	Peck et al.						
		6,118,274	09/12/2000	Roffman et al.						
		6,351,123	02/26/2002	Gebhardt						
<del></del>	<u> </u>	FORE	IGN PATEN	T DOCUMENTS						
EXAM. INITIALS	REF. DES.	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO			
	B1	OTHER ART (Inc		, Title, Date, Pertinent P		Vol. 11. ps	zs. 903-920			
		1993				•	- 			
	B2	Crozier et al., "A simple design methodology for elliptical cross-section, transverse, asymmetric, head gradient coils for MRI", IEEE Trans. Biomedical Engineering, Vol. 45, No. 7, July 1998, pgs. 945-948 (1998).								
	B3 Tomasi, "Stream function optimization for gradient coil design", Magnetic Resonance in Medipgs. 505-512, 2001									
	B4	Crozier et al., "Gradient coi 103, pgs. 354-357,1993	l design by simul	ated annealing", Journal of	Magnetic R	esonance, S	Series A			
	B5	Algorithm", ACM Transactions on Mathematical Software, Vol. 13, No. 3, pgs. 262-280, September 1987								
	B6	Dodd et al., "An open transverse z-gradient coil design for magnetic resonance imaging", Review of Scientific Instruments, Vol. 73, No. 5, pgs. 2208-2210, May 2002								
	B7	Dodd et al., "An Open-Coil Design for Functional Imaging of the Primate Brain", Proc. of the 6 <sup>th</sup> ISMRM, Sydney, Australia, April 1998								
	B8									
		S. Pissanetzky, "Minimum of 667-673, July 1992		ent coils of general geomet	ry," Meas. S	Sci. Techno	lo. 3, pgs.			

## **EXAMINER:**

## DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the patent owner.

		<b>O-1449</b> (modified)	ATTY. DKT. NO. 5660-01901		SERIAL NO. 10/827,099							
For Applicant's Information			APPLICANT: Stephen J. Dodd		GROUP: 2858							
Obclosure Statement (Use Sveral sheets if necessary)			FILING DATE: April 19, 2004									
W S			6. PATENT DOCUMENTS									
THE WAR	REF.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB	FILING DATE					
INITIALS	DES.					CLASS	IF APPROPRIATE					
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)												
		Wong et al., "Coil optimization for MRI by conjugate gradient descent," Magn. Reson. Med. 1991 Sep; 21(1): 39-48.										
	-	Petropoulos, "Finite size disc gradient coil set for open vertical field magnets", Magnetic Resonance Imaging 18, pgs. 615-624										
		Carlson et al., "Design and evaluation of shielded gradient coils", Magnetic Resonance in Medicine 26, pgs.191-206, 1991										
		Tomasi et al., "Fast optimization of a biplanar gradient coil set," Journal of Magnetic Resonance 140, pgs. 325-339, 1999										
		Fisher et al., "Design of a biplanar gradient coil using a genetic algorithm", Magnetic Resonance Imaging, Vol. 15, No. 3, pgs. 369-376										
•		Du et al., "Optimal design of gradient coils in MR imaging: optimizing coil performance versus minimizing cost functions", pgs. 500-503										
		Lawrence et al., "An inverse design of an open, head/neck RF coil for MRI", IEEE Transactions on Biomedical Engineering, Vol. 49, No. 9, September 2002										
		. *										
					0							
·												
							-					

**EXAMINER:** 

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the patent owner.